

ABSTRACT

Methods for reducing interference from initializing network devices in a data-over-cable system. The method includes aligning Initial Maintenance intervals for multiple upstream channels of the data-over-cable system. A cable modem termination system determines if usage intervals for the upstream channels may accommodate Initial Maintenance intervals that start at a common time. If so, the cable modem termination system constructs Bandwidth Allocation MAP messages for the usage intervals that contain Initial Maintenance intervals timed to start at the common time. In response to the MAP messages, initializing network devices range when there are no scheduled data transmissions on any upstream channel. The method may shorten a cable modem's time for ranging and may decrease collisions with data transmissions on the upstream paths when cable modems try to initialize.